IN THE CLAIMS:

Please AMEND claims 1-5, 8-11, 15-20, and 22; and

Please CANCEL claims 6-7 and 12 without prejudice or disclaimer, as shown

below.

1.   (Currently Amended) A ~~communication~~ system, comprising:

a hub comprising a transceiver;

a plurality of communication nodes connected by a data link to the transceiver by

a common bus or a wireless broadcast channel, the data link being a shared data link

whereby any node connected to the data link has access to communications broadcast

over the common bus or wireless broadcast channel; and

a communication controller configured to allocate link-level addresses to the

communication nodes,

wherein the communication nodes may be identified for communications over the

~~data link~~common bus or wireless broadcast channel, ~~and~~

wherein the communication controller is further configured to change from time to

time the link-level addresses allocated to ~~each~~all of the plurality of communication ~~node~~

nodes connected to the common bus or wireless broadcast channel and to transmit the

newly allocated link-level ~~address~~ addresses to ~~a~~ respective communication ~~node~~ nodes

in an encrypted form over the common bus or wireless broadcast channel,

wherein the communication system comprises a data distribution unit connected between the data link and at least one external data source, and wherein the data distribution unit is configured to forward data from the data source to the communication nodes via the data link, and

wherein the data distribution unit is further configured to forward the data to the plurality of communication nodes in a random or pseudo-random order over the common bus or wireless broadcast channel.

2.   (Currently Amended) A ~~communication~~ system as claimed in claim 1, wherein communications over the data link comprise an address part, indicating the address of the one of the communication nodes to which the respective communication is directed, and a payload part.

3.   (Currently Amended) A ~~communication~~ system as claimed in claim 2, wherein the address part is not encrypted.

4.   (Currently Amended) A ~~communication~~ system as claimed in claim 2, wherein the payload part is encrypted.

5.   (Currently Amended) A ~~communication~~ system as claimed in claim 1, wherein communications over the data link are in the form of data packets.

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6-7   (Cancelled)

8.   (Currently Amended)   A ~~communication~~ system as claimed in claim 6,

wherein the data distribution unit is configured to, when it would otherwise not be

transmitting data to the communication nodes, transmit over the data link

communications addressed to a link-level address that is not allocated to any of the

communication nodes.

9.   (Currently Amended)   A ~~communication~~ system as claimed in claim 1,

wherein a communication node is configured to store a link-level address allocated to it

and to ignore communications on the data link addressed to link-level addresses other

than that link-level address.

10.   (Currently Amended)   A ~~communication~~ system as claimed in claim 1,

wherein the data link is an Ethernet link.

11.   (Currently Amended)   A ~~communication~~ system as claimed in claim 10,

wherein the link-level addresses are Ethernet PHY ID addresses.

12-14 (Cancelled)

15.   (Currently Amended)   ~~An~~ apparatus, comprising~~A communication~~ ~~controller for operating in a communication system comprising a plurality of~~ ~~communication nodes connected by a data link, the communication controller being~~ ~~configured to~~:

a controller configured to

allocate link-level addresses to a~~the~~ plurality of communication nodes connected by a data link to a transceiver of a hub by a common bus or a wireless broadcast channel, wherein the communication nodes may be identified for communications over the data link, the data link being a shared data link whereby any node connected to the data link has access to communications broadcast over the common bus or wireless broadcast channel,~~; and~~

change from time to time the link-level addresses allocated to ~~each~~all of the plurality of communication ~~node~~nodes, ~~and~~connected to the common bus or wireless broadcast channel,

~~to~~ transmit the newly allocated link-level addresses to ~~a~~ respective communication ~~node~~nodes in an encrypted form, and

forward data the plurality of communication nodes in a random or pseudo-random order over the common bus or wireless broadcast channel.

16.   (Currently Amended) A communication controllerAn apparatus as claimed in claim 15, wherein the controller is further configured to transmit the newly allocated link-level addresses to the respective node in a communication comprising an address part configured to indicate a current address of the respective node and a payload part comprising the newly allocated addresses in encrypted form.

17.   (Currently Amended) A communication controllerAn apparatus as claimed in claim 15, wherein the controller is further configured to:

allocate encryption keys to each of the plurality of communication nodes; and

change from time to time the encryption key allocated to each of the plurality of communication nodes; and

transmit the newly allocated encryption key to the respective node in encrypted form.

18.   (Currently Amended) A communication controllerAn apparatus as claimed in claim 17, wherein the controller is further configured to transmit the newly allocated encryption key to the respective node in the payload part that contains a newly allocated address for the respective node.

19.   (Currently Amended) A communication controllerAn apparatus as claimed in claim 15, wherein the controller is further configured to change the link-level

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addresses allocated to each of the plurality of communication nodes at one of random, pseudo-random, or periodic intervals.

20. (Currently Amended) A method, ~~for operating a communication controller in a communication system comprising a plurality of communication nodes connected by a data link, the method~~ comprising:

allocating link-level addresses to a~~the~~ plurality of communication nodes connected by a data link to a transceiver of a hub by a common bus or a wireless broadcast channel, wherein the communication nodes may be identified for communications over the data link, the data link being a shared data link whereby any node connected to the data link has access to communications broadcast over the common bus or wireless broadcast channel;~~and~~

changing from time to time the link-level addresses allocated to all of the plurality of~~each~~ communication ~~node~~nodes;~~and~~

transmitting the newly allocated link-level addresses to a respective communication node in an encrypted form; and

forwarding data to the plurality of communication nodes in a random or pseudo-random order over the common bus or wireless broadcast channel.

21. (Previously Presented) A method as claimed in claim 20, wherein the transmitting comprises transmitting the newly allocated link-level addresses to the

respective node in a communication comprising an address part configured to indicate a current address of the respective node and a payload part comprising the newly allocated addresses in encrypted form.

22. (Currently Amended) A method as claimed in claim 20, further comprising:

allocating encryption keys to each of the plurality of communication nodes; and

changing from time to time the encryption key allocated to each of the plurality of communication nodes; and

transmitting the newly allocated encryption key to the respective node in encrypted form.

23. (Previously Presented) A method as claimed in claim 22, wherein the transmitting further comprises transmitting the newly allocated encryption key to the respective node in the payload part that contains a newly allocated address for the respective node.

24. (Previously Presented) A method as claimed in claim 20, wherein the changing comprises changing the link-level addresses allocated to each of the plurality of communication nodes at one of random, pseudo-random, or periodic intervals.

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25-29 (Cancelled)

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